

# PROF. DR. JOHAN ROCKSTRÖM



## CURRENT POSITIONS

- Director of the Potsdam Institute for Climate Impact Research (PIK), PIK's research has been rated "excellent" during the 2022 Leibniz evaluation
- Professor in Earth System Science at the Institute of Earth and Environmental Science, Potsdam University
- Professor in Water Systems and Global Sustainability, Stockholm University
- Chief Scientist, Conservation International

## CONTACT

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## PROFILE

Johan Rockström is an internationally leading scientist on Earth system resilience, global sustainability and sustainable development. He is the Director of the Potsdam Institute for Climate Impact Research, Germany, and the Chief Scientist of Conservation International. He is the former Founding Director of the Stockholm Resilience Centre at Stockholm University, and the former Executive Director of the Stockholm Environment Institute.

He is deeply involved in numerous research activities covering a broad range of topics related to the Earth System and global sustainability in the Anthropocene with the overarching research question: "What is the safe operating space for Humanity's future on Earth, and what are the sustainable transformations that can take us there?"

Rockström has over 25 years' experience in interdisciplinary research on sustainable development and Earth system research, ranging from global water resources, ecosystem services, agricultural development, and social-ecological resilience, with over 250 research publications. He serves as advisor to international organizations, governments, the UN and the European Union, and is a frequent keynote speaker for international business, policy and academia. He led the transition team designing Future Earth ([www.futureearth.org](http://www.futureearth.org)) (the integration of the Global Environment Change programs under ICSU), served on the Swedish Prime Minister's (PM) Futures Commission 2012-2013. In 2012 and 2013 he was voted Sweden's most influential person on environmental issues, and was in 2009 voted Swede of the year.

He currently co-chairs the Advisory Board of Future Earth and the EAT Initiative (together with Gunhild Stordalen) and he co-chairs the Earth Commission of the Global Commons Alliance, and is a member of the leadership council of the Sustainable Development Solutions Network (SDSN) global theme on pathways to attain the Sustainable Development Goals within Earth system boundaries (the World in 2050 initiative, TWI2050). He has given three TED Global Talks and is a highly demanded advisor to the World Economic Forum (WEF), the World Business Council for Sustainable Development (WBCSD), as well as philanthropy, foundations, NGOs and businesses in the US and beyond. In 2021, he launched a Netflix Documentary on the science of our Planet in the Anthropocene (Breaking Boundaries) together with Sir David Attenborough, and his fifth book - Breaking Boundaries, together with Owen Gaffney.

## EDUCATION

- 1997      ■ PhD, Natural Resources Management, Institute for System Ecology, University of Stockholm
- 1995      ■ Licenciante of Philosophy (Ph Lic), Stockholm Universitat
- 1993      ■ Diplome d'Agonomie Approfondie, Grande Ecole Institute National Agronomique, Paris-Grignon
- 1992      ■ Master of Science, Agricultural Sciences, University of Agricultural Sciences, Uppsala, Sweden

## CAREER

- since 2018      ■ Director, Potsdam Institute for Climate Impact Research
- since 2018      ■ Chief Scientist, Conservation International
- since 2018      ■ ERC Advanced Grant, Earth Resilience in the Anthropocene (ERA) Project
- 2007 - 2018      ■ Executive Director, Stockholm Resilience Centre (SRC), Stockholm University, Sweden
- 2004 - 2012      ■ Executive Director, Stockholm Environment Institute (SEI), Sweden
- 2000 - 2004      ■ Senior lecturer and regional research coordinator (WaterNet, Southern Africa) Unesco-IHE, Delft, Netherlands
- 1998 - 2000      ■ Regional Advisor, land and water management for SIDA's Regional Land Management Unit (RELMA) in East Africa

## MEMBERSHIPS OF BOARDS AND COMMITTEES, SCIENTIFIC POLICY ADVICE (selection)

- Chair, Earth League
- Co-Chair and Commissioner, Climate Governance Commission
- Co-Chair, Global Commission on the Economics of Water
- Co-Chair, Earth Commission
- Principle founder, Member, Steering Committee, Global Commons Alliance
- Co-Chair, Future Earth Advisory Board
- Member, Leopoldina, German Academy of Sciences
- Founding Director, Stockholm Resilience Centre, Stockholm University
- Advisory Board at of the Stockholm Resilience Centre, Stockholm University
- Member, Climate and Environment Advisory Council, European Investment Bank Advisory Group
- Advisor, World Economic Forum (WEF)
- Member Leadership Council, United Nations Sustainable Development Solutions Network (SDSN)
- Board Member, Global Challenges Foundation
- Member Board of Trustee, Cool Earth
- Chairman of Advisory Board, EAT-Lancet Commission on Health, Food and Sustainability
- Member, International Panel of Experts on Sustainable Food Systems
- Member of Steering Board and Advisory Board, Weathering Risk Strategy
- Honorary Doctorate, Ghent University and Amsterdam University
- Member, Royal Swedish Academy of Sciences (KVA)
- Member, Swedish Academy of Engineering Sciences (IVA)
- Member, Royal Swedish Academy of Agriculture and Forestry (KSLA)

## TOP PUBLIKATIONS

### ISI Publications

Rockström, J., Gupta, J., Qin, D. *et al.* **Safe and just Earth system boundaries.** (2023) *Nature*.

Armstrong McKay, D. I., Staal, A., Abrams, J. F., Winkelmann, R., Sakschewski, B., Loriani, S., Fetzer, I., Cornell, S.E., Rockström, R., Lenton, T.M. (2022). **Exceeding 1.5°C global warming could trigger multiple climate tipping points**. *Science* 377 (6611).

Kemp, L., Xu, C., Depledge, J., Ebi, K.L., Gibbins, G., Kohler, T.A., Rockström, J., Scheffer, M., Schellnhuber, H.J., Steffen, W., Lenton, T.M. (2022): **Climate Endgame: Exploring catastrophic climate change scenarios**. National Academy of Sciences.

Landrigan, P.J., Fuller, R., Acosta, N.J.R., Adeyi, O., Arnold, R., Basu, N.N., Baldé, A.B., Bertollini, R., Bose-O'Reilly, S., Boufford, J., Breyse, P.N., Chiles, T., Mahidol, C., Coll-Seck, A.M., Cropper, M.L., Fobil, J., Fuster, V., Greenstone, M., Haines, A., Hanrahan, D., Hunter, D., Khare, M., Krupnick, A., Lanphear, B., Lohani, B., Martin, K., Mathiasen, K.V., McTeer, M.A., Murray, C.J.L., Ndahimananjara, J.D., Perera, F., Potočnik, J., Preker, A.S., Ramesh, J., Rockström, J., Salinas, C., Samson, L.D., Sandilya, K., Sly, P.D., Smith, K.R., Steiner, A., Stewart, R.B., Suk, W.A., van Schayck, O.C.P., Yadama, G.N., Yumkella, K., Zhong, M. 2018. **The Lancet Commission on pollution and health**, *Lancet* 391 (10119).

Rockström, J., Gaffney, O., Rogelj, J. et. al. 2017. **A roadmap for rapid decarbonization**. *Science* 355(6331), pp. 1269-1271.

Steffen, W., K. Richardson, J. Rockström, S.E. Cornell, I. Fetzer, E.M. Bennett, R. Biggs, S.R. Carpenter, W. De Vries, C.A. De Wit, C. Folke, D. Gerten, J. Heinke, G.M. Mace, L.M. Persson, V. Ramanathan, B. Meyers, S. Sörlin. 2015. **Planetary boundaries: Guiding human development on a changing planet**. *Science* 347(6223), p. 1259855.

Steffen, W., A. Persson, L. Deutsch, J. Zalasiewicz, M. Williams, K. Richardson, C. Crumley, P. Crutzen, C. Folke, L. Gordon, M. Molina, V. Ramanathan, J. Rockstrom, M. Scheffer, H. J. Schellnhuber and U. Svedin. 2011. **The Anthropocene: From Global Change to Planetary Stewardship**, *Ambio* 40 (7), pp. 739-761.

Miller, F., H. Osbahr, E. Boyd, F. Thomalla, S. Bharwani, G. Ziervogel, B. Walker, J. Birkmann, S. van der Leeuw, J. Rockstrom, J. Hinkel, T. Downing, C. Folke and D. Nelson. 2010. **Resilience and Vulnerability: Complementary or Conflicting Concepts?**, *Ecology and Society* 15 (3).

Rockström, J., W. Steffen, K. Noone, A. Persson, F. S. Chapin, E. F. Lambin, T. M. Lenton, M. Scheffer, C. Folke, H. J. Schellnhuber, B. Nykvist, C. A. de Wit, T. Hughes, S. van der Leeuw, H. Rodhe, S. Sorlin, P. K. Snyder, R. Costanza, U. Svedin, M. Falkenmark, L. Karlberg, R. W. Corell, V. J. Fabry, J. Hansen, B. Walker, D. Liverman, K. Richardson, P. Crutzen and J. A. Foley. 2009. **A safe operating space for humanity**, *Nature* 461 (7263), pp. 472-475.

Rockström, J., W. Steffen, K. Noone, A. Persson, F. S. Chapin, E. Lambin, T. M. Lenton, M. Scheffer, C. Folke, H. J. Schellnhuber, B. Nykvist, C. A. de Wit, T. Hughes, S. van der Leeuw, H. Rodhe, S. Sorlin, P. K. Snyder, R. Costanza, U. Svedin, M. Falkenmark, L. Karlberg, R. W. Corell, V. J. Fabry, J. Hansen, B. Walker, D. Liverman, K. Richardson, P. Crutzen and J. Foley. 2009. **Planetary Boundaries: Exploring the Safe Operating Space for Humanity**, *Ecology and Society* 14 (2).

Adger, W. N., T. P. Hughes, C. Folke, S. R. Carpenter and J. Rockstrom. 2005. **Social-ecological resilience to coastal disasters**, *Science* 309 (5373), pp. 1036-1039.

### **Books (most recent)**

Dixon-Declève, S., Gaffney, O., Ghosh, J., Randers, J., Rockström, J., Stocknes, P. E. 2022. **Earth for All – A Survival Guide for Humanity**. Oekom, Munich.

Rockström, J., and Gaffney, O. 2021. Breaking Boundaries - the Science of our Planet. DK/Penguin.

Rockström, J., M. Klum. 2015. Big World, Small Planet: Abundance within Planetary Boundaries. Bokförlaget Max Ström, Stockholm.

Rockström, J., M. Falkenmark, C. Folke, M. Lannerstad, J. Barron, E. Enfors, L. Gordon, J. Heinke, H. Hoff, C. Pahl-Wostl. 2014. Water Resilience for Human Prosperity. Cambridge University Press.

Wijkman, A., and Rockström, J. 2011. Bankrupting Nature: Denying our Planetary Boundaries. Routledge.

Rockström, J., and Klum, M. 2012. The Human Quest: Prospering within Planetary Boundaries, with foreword by President Bill Clinton and Nobel Laureates Yuan Tse-Lee (ICSU President) and Paul Crutzen, Langenskiöld Förlag, Stockholm.

Rockström, J., Bignet, V., Landquist, M. Stordalen, G. 2019. Eat Good – Das Kochbuch, das die Welt verändert. Gerstenberg Verlag, Hildesheim

## MAIN RESEARCH INTERESTS

- Global Sustainability
- Sustainable Development
- Planetary Boundaries
- Public engagement
- Water resources and management
- Resource management
- Policy
- Resilience

## AWARDS, FELLOWSHIPS

- KTH Large Climate Science Prize (Royal Technical University) (2021)

- Laureate, Prince Albert II of Monaco Foundation Award (2020)
- Laureate, Hillary Institute of International leadership (2017)
- French distinction Knight of the Legion of Honour (2016)
- Environmental Award (Deutsche Umweltpreis) (2015)
- International Cosmos Prize (2015)
- Zoological Society of London Award for Conservation Innovation (2015)
- Humanitas Professor of Sustainability Science at Cambridge University (2014)
- The Woods Hole Research Center's Lawrence Huntington Environmental Prize (2014)
- Marsh Award for Climate Change Research, British Ecological Society (2013)
- Agronomist of the Year, Swedish Association of Professional Scientists (2013)
- Sweden's Most Influential Person on the Environment, MiljöAktuellt (2012, 2013)
- FOKUS magazine Swede of the Year (2009)